

ABSTRACT

Disclosed here is a plasma display unit that employs phosphors having an amount of charge controlled close to zero, by which degradation in luminance, color temperature, and charge characteristics can be minimized. A phosphor bearing positive or negative charge is coated with a compound for controlling the amount of charge of the phosphor through a strong chemical bonding, whereby the amount of charge of a phosphor can be suppressed within $\pm 0.01 \mu\text{C/g}$. Controlling the amount of charge of phosphors close to zero can keep impurity gases away from the phosphor particle when the panel is in operation, suppressing problems critical to driving a plasma display unit, such as luminance degradation of phosphors, improper alignment of color in panel operation, luminance degradation when the panel displays all white.